

REMARKS/ARGUMENTS

Claims 1-5 and 7-15 stand rejected, with claim 6 objected to in the outstanding Official Action. Claims 1-3 have been cancelled without prejudice, claims 4 and 7-15 amended and newly written claim 16 offered for consideration. Therefore, claims 4-16 are the only claims remaining in this application.

The Examiner's acknowledgment of Applicants' claim for foreign priority and receipt of the certified copy of the priority document is very much appreciated. Additionally, the Examiner's consideration of the prior art attached to Applicants' previously submitted Information Disclosure Statements is appreciated.

Claims 7 and 12 stand rejected under 35 USC §112 (second paragraph) as being indefinite. The Examiner indicates that there is no reference in claim 7 to a "first resistivity sensor" and therefore the reference to a second resistivity sensor is unclear. Applicants have deleted the reference to a "second" resistivity sensor and therefore the two resistivity sensors mentioned in claim 7 would cover either the first resistivity sensor and the second resistivity sensor in claim 4 (from which claim 7 depends) or other resistivity sensors specified in the claim.

In claim 12, the Examiner correctly notes that the phrase "for example" is objectionable. Applicants have deleted the phrase, along with the limitation that the resistance thermometer sensor is a "platinum resistance thermometer."

In view of the above amendments, all claims are believed to meet the requirements of 35 USC §112 and any further rejection thereunder is respectfully traversed.

Claims 1-3, 7, 9, 11, 12 and 15 stand rejected under 35 USC §102 as being anticipated by Byrne (U.S. Patent 5,446,369). The Court of Appeals for the Federal Circuit has noted in the case

of *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 USPQ 481, 485 (Fed. Cir. 1984) that "[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

Applicants have cancelled claims 1-3 and incorporated the limitations therein into amended, and now independent, claim 4, from which all remaining dependent claims ultimately depend. Applicants notes that original claim 4 specifies that the first and second resistivity sensors have thin film tracks of different widths. However, the Examiner admits that the Byrne reference does "not teach two resistivity sensors having conductive tracks of different widths"(Page 4, section 16). Accordingly, claim 4 and claimed dependent thereon cannot be anticipated by the Byrne patent and therefore any further rejection thereunder is respectfully traversed.

Claims 4 and 5 stand rejected under 35 USC §103 as unpatentable over Byrne in view of Ansuini (U.S. Patent 4,780,664). The Examiner's admission that Byrne does not "teach two resistivity sensors having conductive tracks of different widths" (Official Action, page 4, section 16, lines 1 and 2) is very much appreciated. The Examiner alleges that the Ansuini reference discloses tracks having different widths, but the width of resistive sensor tracks 66 and 85 are the same width. It is noted that in Ansuini, the tracks 64, 68, 84, and 88 are all galvanic sensors and are not resistivity sensors. Ansuini specifically states that the "measured resistance of the overall electrode 60 from end to end will be almost equal to the resistance of choke point 66. In effect, plates 64, 68 act as lead wires to choke point 66." (Column 6, lines 25-28). Thus, Ansuini indicates that the plates 64, 68, 84 and 88 are not resistive sensors in any fashion. The only resistive sensors in Ansuini are at choke points 66 and 86 and the width of these tracks appears to

be the same. There is certainly no disclosure that the resistivity tracks have any substantially different width. As a result, Ansuini teaches only a single width for its resistivity sensors.

In view of the above, Ansuini, in disclosing resistive tracks that have the identical width, clearly would lead one of ordinary skill in the art away from a resistivity sensor which has tracks of different width. The Court of Appeals for the Federal Circuit has held that "the PTO has the burden under §103 to establish a *prima facie* case of obviousness." *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The Court went on to say that the PTO "can satisfy this burden only by showing some objective teaching in the prior art" *Id.* Because neither Byrne (as admitted by the Examiner) or Ansuini (as identified in the Ansuini reference) teach resistive sensor tracks having different widths, no identified reference has the necessary "objective teaching in the prior art" which is required to meet the PTO burden of proof. Accordingly, any rejection of claims 5 and 6 over the Byrne/Ansuini combination is respectfully traversed.

The Court of Appeals also held that it is "error to find obviousness where references 'diverge from and teach away from the invention at hand'." *In re Fine*, at 1599. Because the Examiner admits that the Byrne reference does not teach resistivity sensors having conductive tracks of different widths and because Ansuini teaches that resistivity portions 66 and 86 should have the same track width, Ansuini clearly would lead one of ordinary skill in the art away from Applicants' claimed invention comprising tracks of different widths. Thus, the Byrne/Ansuini combination would lead one of ordinary skill in the art away from Applicants' claimed invention, thereby indicating non-obviousness of the claimed combination.

Claim 10 stands rejected under 35 USC §103 as unpatentable over Byrne in view of Agarwala (U.S. Patent 5,338,432). Claim 10 has been amended to depend from claim 4 and

therefore the above comments distinguishing claim 4 from the Byrne reference are herein incorporated by reference. The Examiner's admission that Byrne does not teach resistivity sensors having conductive tracks of different widths would seem to be dispositive of the rejection of claim 10. There is no allegation that Agarwala teaches the resistive sensor tracks having different widths and therefore even if the two references were combined, they would not disclose the subject matter of claim 4, let alone claim 10 dependent thereon.

Claim 13 stands rejected under 35 USC §103 as unpatentable over Byrne in view of Nakada (U.S. Patent 6,516,785). Again, claim 13 ultimately depends from claim 4 and the claim 4 requirement of resistive sensors having different track widths is admitted by the Examiner to be missing from the Byrne reference. There is no allegation that Nakada teaches this missing "objective teaching" and therefore Byrne and Nakada fail to suggest the subject matter of Applicants' claim 4 or claim 13 dependent thereon.

Claims 8 and 14 stand rejected under 35 USC §103 as unpatentable over Byrne. Claims 8 and 14 have been amended to depend from claim 4 and therefore the above comments distinguishing claim 4 from the Byrne reference are herein incorporated by reference. The Examiner's admits that the Byrne reference does not "specifically teach two corrosion sensors which have tin films [thin films?] tracks made of different metallic compositions." In view of this admission, the Examiner does not indicate how or why Byrne would teach the subject matter of claim 8.

Similarly, the Examiner admits that "Byrne et al. do not teach the corrosion sensors being on the same substrate." In view of this admission and the fact that Byrne does not teach different widths in resistivity sensors, there is no reason to believe that one of ordinary skill in the art

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would devise a microsensor according to claim 14. In view of the above, there is simply no basis for rejection of amended claims 8 and 14 under 35 USC §103 as unpatentable over Byrne.

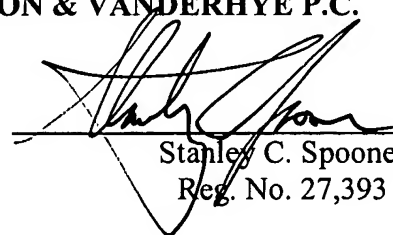
The indicated allowable subject matter in claim 6 is very much appreciated. Applicants have rewritten claim 6 along with the limitations of claims 1-5 from which it depended as newly written claim 16. As a result, entry and allowance of newly written claim 16 is respectfully requested.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that remaining claims 4-16 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, he is respectfully requested to contact Applicant's undersigned representative.

Respectfully submitted,

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